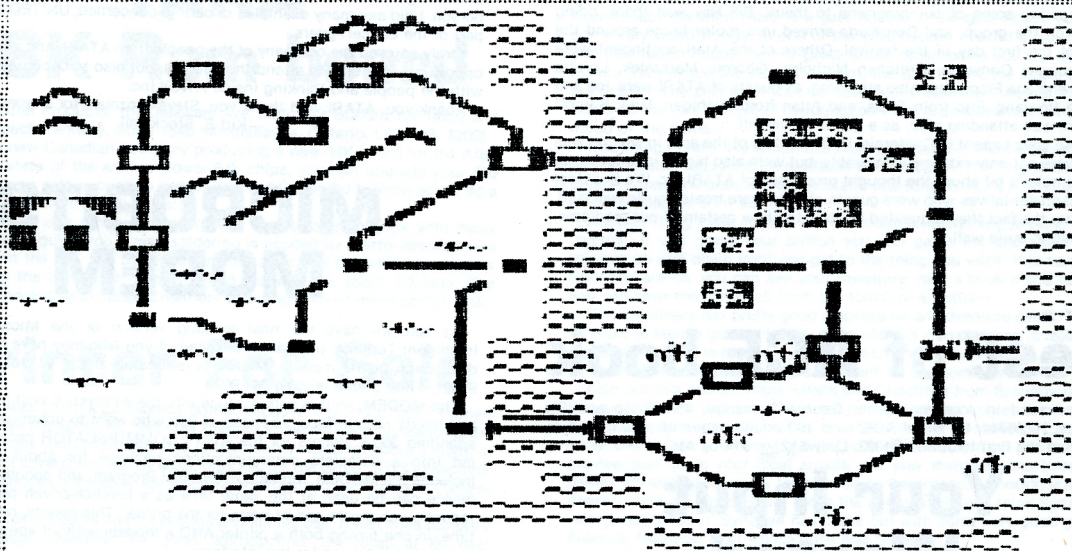# ATARI COMPUTER ENTHUSIASTS

3662 Vine Maple Dr. Eugene OR 97405

October, 1982
Mike Dunn & Jim Bumpas, Editors

TIGER IS
ON THE PLAIN

Report on the US Festival

OR
The prez visits the old stomping grounds.

For those of you out there who hadn't heard of the US Festival, let me give you a little background. There is a rich young man named Steve Wozniak (Computer Entrepeneur) who wanted to throw the biggest party anybody had ever thrown. So he formed a corporation called UNUSON (UNite Us in SONg), and instructed the corporate types to get many goodly rock bands to play at his party. There was much work to be done, which took the better part of a year. This included preparing a site at which large quantities of people could party and be relatively comfortable. A small hill had to be removed from its place, and many miles of pipes and electrical cables were buried under the ground. The concert area, 55 acres, was planted with grass seed and watered daily so the dust would be kept to a minimum.

As well as just being a big party, the rich young man wanted to expose as many people as he could to the various personal and small-business computers on the market. To do this, he ordered many LARGE tents set up, with air conditioning and electricity, and he invited many businesses and computer makers to display their wares.

And ATARI,Inc., looked, and saw it was very good. And they (ATARI) said, "Let us invite the presidents of our largest user groups to attend this Festival as our guests". And it came to pass on September 2, I left for California, as a guest of ATARI, and representing the A.C.E. of Eugene.

Mark Cater met me at the Ontario International Airport, and took me to the Ontario Holiday Inn, where we were lodged in quite nice rooms. After changing and having an oportunity to meet several of the ATARI contingent, as well as some of my peers, we went out to Glen Helen Regional Park to look over the site and see how preperations were coming along. There were the usual hitches at the site, since most of the security people and other festival employes were new to this type of thing, but they learned fast, and the festival progressed quite nicely.

ATARI sent quite a crowd of representatives from various parts of the corporate structure, and I found them to be an enjoyable and personable group. We had many good laughs between us, as well as lots of serious discussions concerning the position of the User Groups, Corporate Policy, Future Products, and Who's on First.

I (being a programmer) spent quite some time discussing the Operating System with Dave Menconi, who programs for ATARI. Earl Rice, Ann Kelsey, and Ann Gechman were all interested in our software libraries, and we had fun comparing some of our programs to theirs. Bill Ray was there, riding shotgun on the group, and Don Kurtz arrived in a motor home around the middle of the first day of the festival. Others of the Atari contingent were Teddi (boogie) Converse, Gretchen Nicholas, Georgia Marszalek, Loretta Wagner, and Joe Fransisco. Also attending, as guests of ATARI were Joe and Pat from Portland, Eric from Tulsa, and Arlan from Michigan. Mark Benioff (Mr. Atari) was attending also, as a guest of himself.

The five days I spent in California, in the middle of the area in which I was raised, were not only extremely enjoyable, but were also highly instructive, as I learned quite a bit about the thought processes of ATARI,Inc. We five User Group Representatives who were guests of Atari were treated quite well, and, aside from the fact they requested us NOT to show certain of our programs, we got along quite well.

The Festival itself was quite an event. The sound system had to have been one of the best ever assembled, taking advantage of a high level of technology and impressing the daylights out of me. Another mind boggler was the Toshiba DiamondVision television screen setup. This consisted of a primary screen (approx. 30x50 feet) on top of the stage which was incredibly bright, as well as 2 auxilliary screens (approx. 70x70 feet) at the ends of the stage, which weren't as bright but could be seen quite well after dark.

The first night the concert consisted of 4 or 5 PUNK ROCK groups, which I don't enjoy at all, so I didn't stay to see them. The second day the performers were: Eddie Money, Santana, The Kinks, Pat Benatar, and Tom Petty and the Heartbreakers. In between manning the ATARI booth, poking arount the other exhibitor tents, and talking to reporters, I heard and saw quite a bit of nice music that day.

The Third day was the highlight of the MUSIC for me. Early in the day Jerry Jeff Walker performed. I was busy at the time, and didn't miss anything. Later, the Grateful Dead put on quite a long show, and I stopped by to see them. I'm not a DEADHEAD, but did enjoy their performance. Later I heard Jimmy Buffet and the Coral Reefer Band, who aren't bad, but I lost my respect for them when they started doing beer commercials. For me, the evening was heaven, as the entire ATARI gang arrived at the concert area as Jackson Browne was starting his show. Being a solid fan, I got quite hopped up on the great sounds, but really went to heaven when Fleetwood Mac came on stage. Not having danced for over a year, in (deference to a crushed disc that was surgically removed) I suprised myself, and probably some bystanders, by boogying to Fleetwood Mac. I paid for that the next morning.

The technological expo was fun, and I saw many impressive sights, but most computer manufacturers seemed to have felt this was just a bunch of dirty hippies, and there's no sense showing off their nice fancy computers. So Atari and Apple were strongly represented, and IBM, XEROX, DIGITAL, and RADIO SHACK missed the boat. Nearly half a million people tromped through the expo tents, and a pleasing percentage of them stopped and talked to us at the booth. I'm sure ATARI will soon have sold some computers as a result, and I know for a fact that our user group will gain new members. (There are actually people out there who haven't heard of us).

The crowd attending the Festival was incredibly well behaved. In five days of running around the site, I never saw one argument, fight, or bad-tempered person. I did see many examples of caring, concerned, UNITED action on the part of the concert-goers.

I truly enjoyed the company of the people from ATARI, and appreciated the opportunity not only to attend the Festival, but also to become more familiar with the people and thinking inside ATARI,Inc.

Thank you, ATARI, and thank you, Steve Wozniak, for a wonderful time.
—Kirt E. Stockwell

Best of ACE book

Please send in your money to: George Suetsugu, 45-602 Apuapu St, Kanoehe, HI 96744, for All of ACE, over 160 bound pages of past issues of ACE, from the first to June of 1982. Only $12, or $14 by Air.

Your Input Wanted

Because of our wonderful members, we have many articles sent in each month and usually print them all. As we get bigger and bigger, the newsletter is getting past the size of the one-ounce limit. By using a typesetting service, special lightweight coated paper and/or other special techniques, we could add more and still only use one 20 cent stamp. This will increase costs, and we will have to raise our fees from $10, modestly, say to $13. Or, since we hope to get our non-profit status soon, use bulk or non-profit mail, but then it will take several weeks to get ACE. Or we could accept advertising and not worry about money anymore! In the past, since no one gets paid, we have priced everything at the break-even point; with advertising, we could get more money, but of course less "meat". We will first see how typesetting works—let me know your feelings about all this—drop a card or leave a message on the Bulletin Board. Thanks.
—Mike Dunn

MICROBITS MODEM

At last we have the final working version of the Microbits Modem Intelligent Terminal program. For those of you who may have missed earlier discussion of the modem, Microbits is located at 434 W. 1st, Albany, Ore. 97321. Their phone is (503) 967,9075.

The MODEM, as it is called, plugs into the #4 joystick port of your ATARI, and needs no interface, so those of you who want to communicate without spending 300+ dollars for the ATARI COMMUNICATOR package can now get into a complete communications package for about $160.00. This includes the MODEM, Intelligent Terminal Program, and documentation. This device can be used at the same time as a joystick-driven printer, since it reconfigures the #1 and #1 ports for the printer. This results, now for the first time, in one having both a printer AND a modem without spending the $250 suggested list price for the interface.

The program itself permits up to 9 buffers, which will allow you to download or upload several files separately without wasting phone time. The program includes a handy CHECKSUM feature, which will allow you to verify the accuracy of any file you might download. The features available are displayed in the MENU, and are easily understood and utilized. I have used the MODEM to call the computers at both the local community college, and the local university. The program is quite flexible, and can accomodate a wide range of protocols.

The only complaint I have is the program shows you which mode you are in (such as loading a buffer) by changing the screen color, and I can't tell what color my black and white set is trying to produce. (My wife insists the color set stay in the living room.).

If you are interested in communicating, and don't want to spend a month's wages, call or write Microbits and check out their MODEM. For my money, it's a good buy.
—Kirt E. Stockwell

A.C.E.
Reorganized

As the club has grown on both an international and local level, we have discovered we need to occassionally adapt the structure of the club to match the changing needs and capabilities of the group.

We have recently reorganized the Oregon segment of the A.C.E. in order to deal effectively and fairly with the large numbers of enthusiasts attending the regular monthly meetings. While still holding the regular monthly meetings, we are now also divided into 5 special interest groups. Within the body of this newsletter we will be printing, begining with this issue, a synopsis of each groups activities, goals, and needs. One of the goals of the group as a whole is to develop a more complete body of information and to make this information available to the ATARI public. In this issue, the group articles will explain their goals, and what they might need. We urge you out there in ATARI-LAND to contribute any specific information that might help these groups, so we can help all enthusiasts.

The 5 groups currently organized are: BASIC, which will answer questions and teach use of the BASIC language; FORTH, which will teach the language and will develope useful programs to be printed in the newsletter; MACHINE LANGUAGE, to teach the use of machine language and the intricacies of the powerful graphics capabilities of the ATARI; GAMES, which will work to develop new game ideas, and possibly write some of them (some of you programmers out there might want to contact this group for ideas) ; and last but certainly not the least, EDUCATIONAL GROUP which has outlined several ambitious projects, including the cataloging and evaluation of all known (available) educational software for the ATARI, development of recommended "at-home" or suplementary curriculums, and the development of program concepts to fill in the gaps in currently available educational software.

We strongly urge you to read the articles which these groups will publish, and to contribute where possible. The A.C.E. has become a powerful and well-known group thanks to the participation of all of you out there in ATARI-LAND, and we feel we are just now begining to make real strides toward fulfilling the basic goals which were outlined by Stacy Goff, the founder and first president, and Mike Dunn, co-founder and editor.

With your contributions we can help to bring about a revolution in the way the world looks at Micro-computers, and we can help people learn to let computers help them.

Thank you all for your support

—Kirt E. Stockwell

TARA
48K Ram board

(Tara Computer Products, 107 Delaware Ave, suite 752, Buffalo, NY 14202 and 2 Robert Speck Parkway, Suite 1540, Mississauga, Ontario, L4Z 1H8, $200)

Tara is a new Canadian company producing a new 48K board for the Atari 400. Using state of the art low power 64k chips, you can upgrade your 400 easily. Tara was nice enough to donate one to ACE for the bulletin board, so a big thanks to them from all of us!!

The board is very nicely packaged with a step by step book with many photographs to guide you. Some soldering is needed for a little circuit board which fits on the 400, but the directions are clear and the whole process of taking apart the computer, soldering and testing took about 1/2 hour. The instruction book also includes a memory test program and many useful peeks and pokes.

Printer For Sale

I bought Mike Dunn's Centronics printer because it prints a better formed character than the Microtek (this was before I knew we were typesetting the Newsletter!). So now I have a surplus printer which I used for about 6 months.

I last saw it advertized new for $389, plus $20 for the cable, and $10 each for 3 ribbon cartridges. I'll prepay the shipping to anyone in the States or Canada for $290.

The Microtek printer is fine for listings and similar use. It just does not print a thick enough character for good reproduction. It's rated at 80 cps; 80-column; and will feed roll or single sheet paper.

If you are interested contact: Jim Bumpas, 4405 Dillard Road, Eugene, OR 97405; (503) 484-9925

Attention HAMs

Ad Astra . . ., the Newsletter of the Atari MicroComputer Net User's Group (Jack McKirgan II, WD8BNG, 4749 S.R. 207 N.E., Washington C.H., OH 43160, $10 Year), is for you—filled with hardware articles, ham news and a monthly center-fold Circuit!! They have several nets, including a national one on Sundays, at 1600Z, 14.325 Mhz, then on 7.235. I notice several of the authors and members are ACE members also. This is also a great newsletter for those interested in modifying your atari, etc.

SHERLOCK

DISK UTILITY FROM THE 4TH WORKS

Sherlock is a powerful disk utility which allows the user full access to any formatted disk. The program is menu driven, allows examination of any sector on disk, full editing of any sector on disk by either hex or characters, disassembly directly from disk, a sector map of the disk, search of the disk up to 32 bytes in either hex or characters. Any time there is a chance of altering the contents of the disk a red border is displayed as a warning. All in all a very impressive package. Also included is a disk copy program. The program is on both sides of the disk for backup and an additional backup disk is avaliable for a nominal fee within one year.

Documentation includes a short tutorial on how files are linked, boot sectors, etc. It only takes a short time to go through the documentation, and is well worth the effort.

I found the search feature to be of great help finding specific sections of code. When found you are given the option of continuing the search, printing the sector or editing the sector. The character search is limited to non-inverse characters.

All numeric input is in hex format, however a decimal-to-hex, hex-to-decimal subroutine is provided for help.

Requirements: Atari 800/400; 810 disk drive or Percom RFD disk drive or MPC disk drive; 32K RAM(48K recomended). A printer is optional.

A very professional package, at $50.00 this could be the program you are looking for.

CHUCK ROSS

Marc Benioff is not selling his games from John Bell at Crystalware any more. He is now selling his games through Automated Simulations (Epyx). Marc has also changed the names and a little bit of some of his earlier games. Forgotten Island has been changed to Vulcan Island; Quest for Power has been changed to King Arthur's Heir and The Crypt I think has been changed to The Haunted Crypt. These games are all available from Epyx or Automated Simulations.

Marc now has a new game out called The Nightmare. The Nightmare is a fantasy adventure in which your goal is to find your Mind's Eye. All you know is that it's located in the Tunnel of Death and there are four monsters guarding the eye. Moriu is one of the monsters in the tunnel; Moriu was beheaded for a crime he didn't do and at the sight of his own head he will immediately let you pass. Another monster is the gruesome Gargoyle. If you are lucky enough to find a can of mace you can blind the Gargoyle's only eye and dart past him. Those are only two of the four monsters you will have to challenge. Other monsters you will meet in your journey are a hungry attacking rat pack; a mistress and maybe even a ghost. Marc is nice enough to have the option in the game to have monsters or not (unfortunately you still get the four monsters in the Tunnel of Death).

There are three floors and a dungeon in this game. In each corner of every floor except the third there is a gate house. In the gate house you will find some very weird things. In one of the gate houses I found a pair of pajamas and they haven't done me any good. Some other rooms you will need to visit in your journey are the Wizard's Room, the Bird Room, the Royal Chambers, the Chapel. You also must visit the bath in this mansion. Another thing I really like is on the very bottom of the dungeon there is a mote which helps sets the mood of the game.

One thing I really like which has been just awful in Marc's previous games is the attack sequence. The attack sequence in The Nightmare is a lot different than the ones in Vulcan Island and King Arthur's Heir. I like the new attack sequence a lot better!

Another thing I like about The Nightmare is everything is done strictly by joystick. If you press your button you will get a list and you move your joystick up and down until you get to the thing you want. You can see what floor you are on; you can see your inventory; read a book if you have one or you can save the game, all from the touch of a button.

The Nightmare has pretty good graphics for an adventure game. The sound, as usual in Marc's games, is very good. Marc is also planning to release a new game pretty soon in high-res like the On-Line adventure games. The game will be called Tunnel World and he says it will be awesome. Well, we'll see Marc!

Also out this month: Track Attack and Choplifter from Broderbund. Both of these games are just as good if not better than the Apple versions. Preppie from Adventure International is another Frogger re-make but is very well done. Centipiede and Pac-Man were both released by Atari and if you want a preview just go to your local arcade and play their versions because both games are almost identical to the ones in the arcade. Although Marc Benioff doesn't think so, my dad and I love the game Nautilus. I think Synapse did a very good job on it. Synapse has come out with some very good games like Shamus, Nautilus, Fort Apocalypse and Slime.

Next month there will be a whole line of very good joysticks coming out including about three or four trac-balls from various companies. Well that's all for this month except I have a message for Mr. Lee Papas, editor of Analog."Lee where is my article????" Until next month goodbye and happy arcading!!

—Brian Dunn

Captain 800

by Marc Russell Benioff
(Formerly Benioff At Large)

Greetings from Hillsborough, California. October is always an exciting month in the San Francisco Bay Area, and so has it been an exciting month for ATARI home computers.

I have just returned from a month in Europe. It is funny, the only place you can find Atari Home Computers is in England, where ATARI has recently constructed ATARI, UK. With heavy advertising and marketing, the ATARI 400/800 is going into England in force.

There are two main software companies for the ATARI in Europe. 1)English Software, and 2)ELCOMP of Germany. English software has most recently released a Scramble-type game called "Air Strike." Airstrike is an exact copy of SCRAMBLE, and anyone who likes SCRAMBLE will like AIR STRIKE! Originally, Air Strike was shipped to the U.S. with a problem in the VBI routine, but this has been corrected. ELCOMP has just finished a word processor on a cartridge for the 400/800, that will work with the cassette!! This word processor sells for $29.95, and is currently being tested by Mike Dunn of Eugene ACE. Also, a new Forth, and a Macro Assembler have been recently released! Winfried Hofacker, president of ELCOMP in Munich, Germany is very excited about both of these new products.

Jerry White has just finished an excellent game. It is a poker simulation against other players, and these players have artificial intelligence. It is called "Poker Tourney" and is being sold by Artworx. The artifical intelligence and logic of the game makes it very challenging, and the cards are drawn in Hi-Res, and will impress any graphics master. According to Jerry, it is a conversion from a North Star product, and then modified for the ATARI by him. The game is all joystick controlled, which is an excellent feature for this type of game. It is available from Artworx. If you are a card game fan of any kind, you will love this game. Jerry comes away with an absolutly super game for any one who is tired of shoot-em-up, and ready for a show of the ATARI's other side. In Poker Tourney, you play cards with other players using standard rules of the poker clubs of Gardena, California. As they say in England, "Good Show, Jerry!"

Before I left I received all of Datasoft's new products. One which really caught my eye recently, is one of their brand new releases, a game called Clowns and Balloons. This is an excellent rip-off (as is all of Datasoft's new software) of Circus ATARI, one of ATARI's VCS cartridges. Using very nice sound and graphic routines, Datasoft shows us a VCS adaption worth playing. It has super sound and graphics, and I recommend it. If you never have seen Circus ATARI, it is a man flying around, trying to pop balloons as he is propelled by two clowns with a trampoline! A very nice game.

Broderbund sent me Track Attack! before I left. I really liked the graphics, but other than that, I feel the game is very marginal. In the game of Track Attack, you are a bandit trying to rob trains, and then a second scenario takes place as you try to jump from train to train. The Atari version is done by Bill Hooper of the Solitare Group in Sacramento. Choplifter, their second release, is close to being my favorite game for the ATARI ever! In choplifter, you fly in a three/two dimensional world trying to save hostages from four enemy camps. Hostages are locked in barracks, 16 per barracks. One barracks has been blown open so the hostages can get free! The object of the game is to retrieve the hostages, then return them to home base safely. You must land your helicopter close to the hostages so they can climb in, then return and put down on the landing pad next to the post office in order to allow them to scramble out. Warning: Do not land on the hostages, that kills them! The hostages' movements are fantastic. In fact, when I land on them by accident (and sometimes on purpose!) I feel a bit sorry for them! Especially the ones which are waving at me!

Gebelli Software sent me four demos recently. 1)Pathfinder, and 2)Embargo (on Disk, their new 8k cartridge, planned for release on August 23). Pathfinder appears to be Andromeda when I first put it on, but hold on! I really like this game. It is a game you have to play 10 or 20 minutes before you can really get into it, but when you do, it is great. Many people have told me it is marginal. But you should judge for yourself. In Pathfinder, you must rid the area of radio active waste and creatures, while absorbing power and endurance.

Embargo is a very nice graphic game. In fact it is one of the best graphicly orientated games around, and for an 8K game, it is not too bad. I was bored with it after the first hour, but as a game for others it may be great! In Embargo, you must bring cargo from a conveyor belt on the ground, to a space ship, while avoiding robot ships which shoot, and blimps which constantly circle the planet.

3)They have released a new adventure called Dr. Goodcode's Cavern. This is an excellent text adventure using all joystick control. My first reaction to the game is that it is very well done, and I will have a future in depth review in the next issue.

4)Also released is a new version of Andromeda, which is slightly better than the first one, and much more enjoyable.

I bought Nautilus from Synapse, in my local computer store. It is a two, or one player game against the computer, using dual (top and bottom) scrolling. It has some of the finest graphics routines for the computer around, BUT the game becomes boring and generally monotonous. And for the average computer user, I can not see any point to the game! I hope they use the utilities for another game of better play.

They have just released a new game called Shamus; it is an arcade adventure of super-fast exciting play! In Shamus, you must search out 4 levels of 32 rooms each to find a demon called the Shadow. It is more of an arcade adventure than any other program for the ATARI. But, I find myself becoming a victim of a shoot-em-up game, even more than the adventure scenarios. But, don't get me wrong, Shamus is an excellent game, and much better than Nautilus.

Sirius Software sent me their first ATARI releases, three in number, and I was a little disappointed considering their Apple reputation. They sent me Cyclod, Snake Byte, and Space Eggs. Snake Byte was horrible. It has sound out of the speaker; keyboard and joystick movements; and is generally a terrible game! Cyclod is what I thought to be a "just all right" game with joystick, and mediocre TV sound, but it is really good. It took me about 20 minutes before it became an interesting game. A very original game, with good sound, graphics and super originality and play-ability. I recommend it. In Cyclod, you are a Cyclops trying to kill snakes by throwing rocks at them, building traps, and running the snakes through. The next in line is the ATARI version of Space Eggs. It allows for joystick, paddles, or keyboard input. Sound through the TV, and a good game. It was released for the Apple 1.5 years ago, and is really very good for the ATARI. I recommend it to the average user for a generally fun game. In Space Eggs, you shoot at eggs which crack and open to reveal animals or objects which you must shoot at again; these include lips, wolves, and spiders. Sirius should be pretty upset over Snake Byte, but the games they are making are getting better and better! I think we will see one of the best games for the ATARI out of Sirius by the end of this year!

Recently released by Adventure International is an excellant version of Frogger, called "Preppie". I will begin my review by telling you that some ATARI programmers call this the best game for the ATARI ever. It is very good, in fact, I have to say it, "Beyond Awesome". In Preppie, you dodge between cars, lawn mowers, and tractors; you jump onto logs, gondolas, and alligators, and all this while some of the best music for the ATARI ever is playing along in 4 part harmony. The reason why the game is called Preppie is because the little man is a Prep. He is dressed in bermuda shorts, a Lacoste T-Shirt, and top siders. It is really a cute game. Even Mom likes it! So, if you are looking for a cute game with GREAT graphics, GREAT music, and GREAT game play, go see Preppie.

Cavalier Computer has finally released Bug Attack. A very good variation on Centipedes. In fact, some have called it, "The best of the Centipedes". It has one major twist, they fire back at you with knives! Sounds interesting, huh? It also has excellent graphics with one channel sound; that isn't too great, but what can you expect from an Apple translation? Well still, I've seen enough Centipedes, and almost as many Froggers.

JV (Jack Verson) Software, has released their sequel to Action Quest, called "Ghost Quest". In Ghost Encounters, you are in an adventure arcade, trying to solve puzzles, in order to go through levels of play. You can turn into keys, torches, hammers, etc. to solve these mysteries, and because I liked Action Quest so much, how can I not like the sequel? But, he could have changed that awful music. Maybe he should see Jerry White!

Recently, the president of ATARI Home Computer Division was released from service. Roger Badertscher had been the president since the beginings of the division. No new president has been chosen. If ATARI wants to contact me for this opening, feel free to call at (415)344-4845, I will be happy to come in and fill out an application.

Atari has been rumored to say the new printer will be an Okidata, but we will have to see.

The home computers will be taking a price drop soon, I understand, but final retail prices have not been decided. Soon after the price drops, ATARI will release their new machine to refill the higher priced area. The new Atari, rumored to be called the "ATARI 1000", supposedlly will have 64K, internal 3" drive support, and other goodies for the Atari enthusiast.

T.H.E.
Smart Terminal

(Binary Corp., 3237 Woodward, Berkley, MI 48072, $50)

An all machine-language terminal program which does everything. It has the unique ability to allow you to download several programs to memory and then later to disk, by using all your available memory as a buffer. It can be configured for any possible use, including baud rates from 45.5 to 1800, ability to use various codes including EBCDIC, use any port for the modem. The documentation is good. I cannot imagine anything else you might want, but with all the versitility, it is more complex than others.
—M. Dunn

4
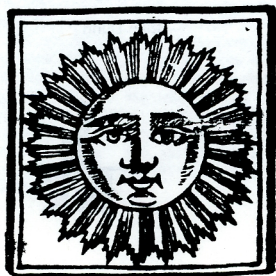
```
2020 ? #6;"1 ) 1#  # QQ / ) ) Q";:REM / IS IN
VERSE
2021 ? #6;"  A$ ) 1) QQ    ) ) Q";:REM A IS (I
NV ESC CTRL =)
2022 ? #6;"  1(A  )QQ < <= =BC";:REM A IS (I
NV ESC CRTL =),B IS (INV CTRL K),C IS (ESC CT
RL TAB)
2023 ? #6;"1   1 )QQ ='& ) Q";
2024 ? #6;"  QQ )QQ 4 1 5) Q";
2025 ? #6;"  QQQQ ABC= <  = Q";:REM A IS (I
NV CTRL =),B IS (INV CTRL K),C IS (INV CTRL L
)
2026 ? #6;" QQQQQ  QQ 5  4 <Q";
2027 ? #6;"  QQQQQ  QQ (=' Q";
2028 ? #6;"  QQQQQQQQQ < QQ";
2029 ? #6;"   QQQQQQQ ";
2030 RETURN
```

```
0013    10 VHILIM   =  $13
0000    20 VLOLIM   =  $0
0013    30 HHILIM   =  $13
0000    40 HLOLIM   =  $0
00CF    50 SHIFT    =  $CF
00D0    60 VPOS     =  $D0
00D1    70 HPOS     =  $D1
0278    80 STICK0   =  $0278
        90 ; ROUTINE TO HANDLE JOYSICK 0 MOVEMENT
0000         0100    *=  $0000
0000 68      0110    PLA          ; # parameters, throw away
0001 AD7802  0120    LDA  STICK0  ; Get stick value
0004 85CF    0130    STA  SHIFT   ; into shift location
0006 A5D0    0140    LDA  VPOS    ; To check on limits
0008 46CF    0150    LSR  SHIFT   ; If 1st bit is 1
000A B006    0160    BCS  DOWN    ; then no upward move
000C C900    0170    CMP  #VLOLIM ; Have we reached top?
000E B002    0180    BCS  DOWN    ; yes, no upward movement
0010 C6D0    0190    DEC  VPOS    ; Else move up once
0012 46CF    0200 DOWN LSR SHIFT  ; If 2nd bit is one
0014 B006    0210    BCS  LEFT    ; then no downward move
0016 C913    0220    CMP  #VHILIM ; Have we reached bottom?
0018 F002    0230    BEQ  LEFT    ; yes, no downward movement
001A E6D0    0240    INC  VPOS    ; move downward once
001C A5D1    0250 LEFT LDA HPOS   ; To check the horiz. limits
001E 46CF    0260    LSR  SHIFT   ; If 3rd bit is one
0020 B006    0270    BCS  RIGHT   ; then no left movement
0022 C900    0280    CMP  #HLOLIM ; Have we reached left side?
0024 F002    0290    BEQ  RIGHT   ; yes, forget left move
0026 C6D1    0300    DEC  HPOS    ; move left one space
0028 46CF    0310 RIGHT LSR SHIFT ; If 4th bit is one
002A B006    0320    BCS  OUT     ; no right movement
002C C913    0330    CMP  #HHILIM ; Have we reached right side?
002E B002    0340    BCS  OUT     ; yes, forget right move
0030 E6D1    0350    INC  HPOS    ; move right one space
0032 60      0360 OUT  RTS        ; And back to basic
```

Bulletin Board #
(503)343-4352

Flash

NEW VERSION
BULLETIN BOARD

The new version of the Armudic Bulletin Board has just arrived from Frank Huband, and it is great!! It uses all the capabilites of the 2 double density Percom drives, and and many new features, including multiple types of download files and message files- be sure to check the "New" download file (4) for the latest programs. It also has lots of room for you to send us your programs by uploading. This is the final, for sale version, and already several of the callers to the BB have asked about how to buy one- contact Frank Huband, 1206 N. Stafford St., Arlington, VA 22201, Bulletin Board # (202)276-8342. It costs $99.

GRUBS cont

```
911 NEXT W
912 FOR W=2 TO 20 STEP 3:X=INT(RND(0)*8)+10:P
OSITION X,W:? #6;"*":POSITION X,W+1:? #6;"*":
POSITION X,W+2:? #6;"*"
913 NEXT W
919 RETURN
920 R=INT(RND(0)*4+1):ON R GOTO 921,922,923,9
24
921 V(N)=1:GOTO 925
922 V(N)=4:GOTO 925
923 V(N)=7:GOTO 925
924 V(N)=10:GOTO 925
925 IF N=1 THEN H(1)=0:C(1)=32:B(1)=0:D(1)=1
926 IF N=2 THEN H(2)=19:C(2)=32:B(2)=0:D(2)=-
1
929 RETURN
1000 DATA 191,191,0,253,253,0,239,239,80,112,
168,81,113,115,127,62
1010 DATA 10,14,21,142,138,206,254,124,48,48,
16,240,16,112,216,8
1020 DATA 26,26,126,88,88,28,22,48,12,12,8,15
,8,14,27,16
```

```
1030 DATA 0,0,0,255,0,0,0,0,0,0,0,0,255,0,0,0
1040 DATA 255,255,255,255,255,255,255,255,129
,255,129,129,129,255,129,129,0,0,0,255,255,0,
0,0
1050 DATA 90,90,90,114,77,77,77,90,90,77
1100 DATA 60,53,47,45,40,35,31,29
1200 DATA 29,31,35,40,45,47,53,60,64,72,81,91
,96,108,121,128,144,162,182,193,217,243
2000 RESTORE 1100:FOR TU=1 TO 8:READ NO:SOUND
0,NO,10,8:FOR W=1 TO 20:NEXT W:NEXT TU
2009 SOUND 0,0,0,0:RETURN
2010 RESTORE 1200:FOR TU=1 TO 11:READ NO:SOUN
D 0,NO,10,8:POKE 712,NO:FOR W=1 TO 25:NEXT W
2011 READ NO:SOUND 0,NO,10,8:POKE 712,NO:FOR
W=1 TO 12:NEXT W:NEXT TU:SOUND 0,0,0,0
2012 FOR W=1 TO 84:NEXT W:FOR W=1 TO 3:SOUND
0,243,10,8:FOR WW=1 TO 10:NEXT WW:SOUND 0,0,0
,0
2013 NEXT W
2019 POKE 712,0:SOUND 0,0,0,0:RETURN
```

C A L L   T O   A S S E M B L Y :
by Tom Newman
(from S*P*A*C*E, Sept 82)
using MicroPainter files

One of the most time consuming tasks in the creation of a game or graphic educational program is the drawing of the pictures and encoding of the data for the computer display. One generally accepted method of doing this is to draw the pictures on graph paper, color them, and once satisfied, perform the laborious task of translating the pixel patterns to their representative numbers. As cumbersome as this method is, there are some applications where it is most advantageous, such as:
   1. CHARACTER GRAPHIC DISPLAYS;
   2.   COMPLEX DISPLAYS USING MANY MIXED MODE LINES; and,
   3.   DISPLAYS USING DISPLAY LIST INTERRUPTS FOR OTHER THAN COLOR CHANGES, SUCH AS PLAYER-MISSILE POSITIONING, PRIORITY CHANGES, OR PLAYER-MISSILE SIZE CHANGES.
   My son Troy has an extreme fascination with the arcade sensation Donkey Kong, and asked me to program the game into our Atari 800. I told him I had too many projects going and could not spare the time for such a large project. To do the game for anything other than our personal amusement invites disaster in the form of a law suit. I was also told by a friend Donkey Kong should soon be available for the Atari, but he could not say from where. After all these good excuses I was sure the subject was dropped. I was wrong.
   Troy and Torie, his younger brother, informed me they were going to do the game themselves. After a couple of hours at the computer I wondered how they were doing. I walked over to check their progress. Low and behold, an all too familiar sight was on the screen, the opening page from Donkey Kong. No motion yet but an excellent example of playfield graphics. When I asked the boys how they did such a fine job so quickly, they said they did it with Micropainter, one of our newer acquisitions.
   Micropainter is an excellent example of an alternative to graph paper -- The Graphics Editor. But as nice as Micropainter is, it still is not much more than a computerized coloring book/sketch pad combination. Lots of crayons, but you may use only four in any one picture. Various patterns are avaiable to the user, made up of two colors. The correct combinations can expand the color sensation dramatically. The drawback: How do you use the pictures in a program? As things stand, you can't. This is where the kids got in trouble.
   The Micropainter pictures are stored on disk using the standard filename structure:
   D#:FILENAME.EXTENSION
The major difference between a file created by Micropainter and a binary file created from DOS or an assembler is contained in the header bytes of the file. Normally a file contains 6 bytes at the beginning which indicate what type of

file follows, where the file is to load, how long the file is, the run address, etc. The Micropainter files do not use header bytes and therefore will not be acknowledged by any of the normal commands: LOAD, ENTER, RUN, etc.

Having spent many hours at the drafting table with graph paper and colored pencils, I decided it will be worth my while to write a program to place Micropainter picture data in memory at the location of my choice. I share this program with you here.

This first program is written using Atari's Assembler/Editor Cartridge.

:LINES 10-400 SETUP INPUT/OUTPUT CONTROL BLOCK #2 TO READ A FILE CALLED "D:DK.MP" INTO RAM AT HEX 6150

:LINES 410-730 ESTABLISH A MODE 'E' DISPLAY LIST LOCATED AT HEX 6036

This mode is not supported by BASIC but is similar to GRAPHICS 7 except with single line resolution. The highest resolution full-color non-character mode in the computer, it is also the most memory hungry. It shares this distinction with GRAPHICS 8, 9, 10, & 11.

192 raster scan lines times 40 bytes per line equals 7680 bytes.

:LINES 731-900 EMBODY THE INITIALIZATION PROGRAM.

This is the starting point. The program is executed with the commands:

    type BUG   see D
EBUG

    type G5F00   see T
HE PICTURE

The TV image has to be updated constantly as the electron beam which traces out the image is only capable of illuminating a small dot at any instant in time. The retention of the human eye fools us into believing the image is simultaneous. This only lasts for about 1/10 of a second. Retention is influenced greatly by the brightness of the image. The computer must store the image to be displayed somewhere in memory. This is termed CRT REFRESH, and it must be maintained constantly. This area will generally be larger for graphics display than for text. The Micropainter program uses ANTIC mode 'E', requiring 7680 bytes of memory for the CRT REFRESH area. In a program

such as Donkey Kong, several different playfield backdrops are required. At 7680 bytes per backdrop, this could easily consume all or at least most of a computer's memory just drawing pictures. This leaves little room for the logic of the game. There are several solutions to this problem:
1. Simplify the program;
2. Consider the implementation of character graphics, i.e., Mode 4; or,
3. Compact the image data and use a common CRT REFRESH area for all backdrops.

I will continue this article in the next issue of S*P*A*C*E newsletter by pursuing item 3. above. I have written a program which, upon loading of the image data, creates two interleaved tables. One for the data byte values and the other for the number of times the value is repeated. By using this technique, I have compacted image data from 1/3 to 1/10 its original size.

I closing I want to give you the core of a BASIC program to display pictures created by Micropainter.

THE ASSEMBLER VERSION:

```
10   *=$5F40
20   GETDK
30   ;********************************
40   LDX #$20        ;
50   LDA #$0C        ; CLOSE IOCB #2
60   STA $342,X      ;
70   JSR $E456       ;
80   ;********************************
90   LDA #ID&$FF      ;
0100 STA $344,X      ;
0110 LDA #ID/256     ;
0120 STA $345,X      ;
0130 LDA #$03        ;
0140 STA $342,X      ; OPEN IOCB #2 FOR
0150 LDA #$04        ;
0160 STA $34A,X      ;      READ
0170 LDA #$00        ;
0180 STA $34B,X      ;
0190 JSR $E456       ;
0200 ;********************************
0210 LDA #$50        ;
0220 STA $344,X      ;
0230 LDA #$61        ;
0240 STA $345,X      ; GO READ THE FILE
0250 LDA #$00        ;
0260 STA $348,X      ; AND PUT IT INTO
0270 LDA #$20        ;
0280 STA $349,X      ; THE BUFFER.
0290 LDA #$05        ;
0300 STA $342,X      ;
0310 JSR $E456       ;
0320 ;********************************
0330 LDA #$0C        ;
0340 STA $342,X      ; CLOSE IOCB #2
0350 JSR $E456       ;
0360 ;********************************
0370 JMP OUT
0380 ID
0385 ;INSERT THE NAME OF YOUR FILE
0386 ;BETWEEN THE QUOTES BELOW.
0390 .BYTE "D:DK.MP",$9B
0400 OUT RTS
```

```
0410 ;********************************
0420 ;
0430 ; MODE 'E' DISPLAYLIST
0440 ;
0450 ;********************************
0460 *=$6036
0470 .BYTE $70,$70,$70,$4E,$50,$61
0480 .BYTE 14,14,14,14,14,14,14,14
0490 .BYTE 14,14,14,14,14,14,14,14
0500 .BYTE 14,14,14,14,14,14,14,14
0510 .BYTE 14,14,14,14,14,14,14,14
0520 .BYTE 14,14,14,14,14,14,14,14
0530 .BYTE 14,14,14,14,14,14,14,14
0540 .BYTE 14,14,14,14,14,14,14,14
0550 .BYTE 14,14,14,14,14,14,14,14
0560 .BYTE 14,14,14,14,14,14,14,14
0570 .BYTE 14,14,14,14,14,14,14,14
0580 .BYTE 14,14,14,14,14,14,14,14
0590 .BYTE 14,14,14,14,14
0600 .BYTE $4E,$00,$70
0610 .BYTE 14,14,14,14,14,14,14,14
0620 .BYTE 14,14,14,14,14,14,14,14
0630 .BYTE 14,14,14,14,14,14,14,14
0640 .BYTE 14,14,14,14,14,14,14,14
0650 .BYTE 14,14,14,14,14,14,14,14
0660 .BYTE 14,14,14,14,14,14,14,14
0670 .BYTE 14,14,14,14,14,14,14,14
0680 .BYTE 14,14,14,14,14,14,14,14
0690 .BYTE 14,14,14,14,14,14,14,14
0700 .BYTE 14,14,14,14,14,14,14,14
0710 .BYTE 14,14,14,14,14,14,14,14
0720 .BYTE 14,14,14,14,14,14,14,14
0730 .BYTE 14,$41,$36,$60
0731 ;********************************
0732 ;
0733 ;    INITIALIZATION PROGRAM
0734 ;
0735 ;********************************
0740 *=$5F00
0750 LDA #$00
0760 STA $022F GRAPHIC CONTROL
0770 LDA #$36
0780 STA $0230 DISPLAYLIST LO
0790 LDA #$60
0800 STA $0231 DISPLAYLIST HI
0810 LDA #$36
0820 STA $02C5 COLOR1
0830 LDA #$96
0840 STA $02C4 COLOR0
0850 LDA #$0E
0860 STA $02C6 COLOR2
0870 LDA #$3E
0880 STA $022F GRAPHIC CONTROL
0890 JSR GETDK
0900 .END
```
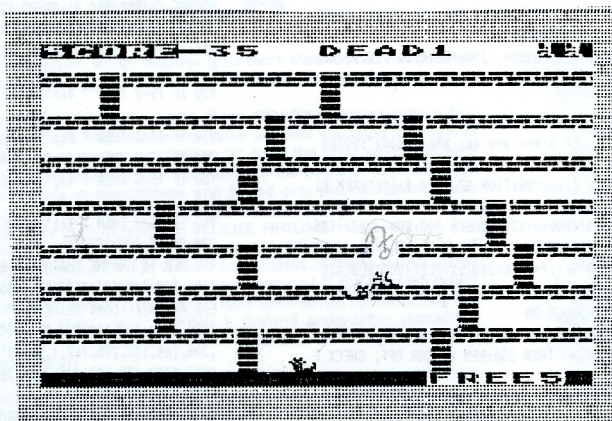
```
1 REM THE BASIC VERSION
2 REM BY TOM NEWMAN
10 OPEN #1,4,0,"D:DK.MP"
20 GRAPHICS 8+16
30 DL=PEEK(560)+PEEK(561)*256
40 POKE DL+3,78
50 FOR A=DL+6 TO DL+98
60 POKE A,14
70 NEXT A
80 POKE DL+99,78
90 FOR A=DL+102 TO DL+198
100 POKE A,14
110 NEXT A
120 S=PEEK(88)+PEEK(89)*256
130 GET #1,CH
140 POKE S,CH
150 S=S+1
160 TRAP 180
170 GOTO 130
180 CLOSE #1
190 GOTO 190
```

Ladder=94


```
0 REM ACE NEWSLETTER 3662 VINE MAPLE DR EUGEN
E, OR 97405, GRUBS by Sidney Brown
1 ? ")":DIM C(11),D(11),H(11),V(11),B(11),D(1
1):POKE 710,16:POKE 709,14:POKE 752,1
2 ?,:? "   G R U B S ":? "THE GRUBS ARE TRY
ING TO ESCAPE TO THE":? "SAFETY OF THE SUBWAY
S TO MULTIPLY AND"
3 ? "TAKE OVER THE EARTH.":? "IT TAKES TEN GR
UBS TO MAKE A COMMUNITY":? "SO YOU MUST TRY
TO DESTROY THEM BEFORE";
4 ? "TEN ESCAPE.":? "YOU DESTROY THEM BY DIGG
ING A HOLE":? "TO TRAP THEM AND THEN BURYING
THEM."
5 ? :? "USE JOYSTICK 1 TO CONTROL THE MAN.":?
 "YOU CAN CLIMB UP OR DOWN A LADDER OR":? "JU
MP DOWN THROUGH A HOLE."
6 ? "PRESS THE RED BUTTON TO DIG OR BURY.":?
"IF THERE IS A HOLE HE WILL BURY IF NOT";:? "
THEN HE WILL DIG."
7 ? "THE GRUBS DON'T STAY TRAPPED FOR LONG":?
 "AND AN ESCAPED GRUB COSTS YOU POINTS."
8 ? "WATCH OUT AS THEY CAN DESTROY YOU TOO "
9 ? :POKE 53279,0
10 ? "PRESS START BUTTON FOR SCORE TABLE";:RE
M START IN INVERSE
11 IF PEEK(53279)<>6 THEN 11
19 POKE 106,PEEK(106)-2
20 GRAPHICS 17:POKE 712,16:POKE 708,30:POKE 7
09,140:POKE 710,188:? #6;"    G R U B S ":A=
PEEK(106)*256
21 ? #6;? #6;? #6;"GRUB ON TOP LEVEL 20
   2ND LEVEL 15      3RD LEVEL 10       4TH
 LEVEL  5";
22 ? #6;"      5TH LEVEL  1        6TH LEVE
L  0       7TH LEVEL  0":? #6;? #6;"  MISSIN
G A TRAPPED"
23 ? #6;" GRUB LOSES 5 POINTS":? #6;? #6;"  y
ou have 4 lives."
25 REM ABOVE NUMBERS IN INVERSE
100 FOR B=0 TO 511
101 IF B>423 THEN READ D:POKE A+B,D:NEXT B:GO
TO 107
106 POKE A+B,PEEK(57344+B):NEXT B
107 POSITION 4,20:? #6;"PRESS start":POKE 532
79,0
109 IF PEEK(53279)<>6 THEN 109
110 ? #6;")":POKE 710,190:POKE 708,44:POKE 70
9,222:POKE 711,142:POKE 756,PEEK(106):POKE 71
2,0
190 POSITION 0,0:? #6;"score0    dead0   xxx":
REM SCORE AND XXX IN INVERSE
194 GOSUB 900:GOSUB 910
195 H=9:V=22:C=32:COLOR 249:PLOT H,V:N=1:FR=0
:SC=0:KD=0:IN=7
199 N=1:GOSUB 920:N=2:GOSUB 920:GOSUB 2000:SO
UND 1,255,0,4
200 ST=STICK(0):IF ST=14 AND V>1 THEN 400
202 IF ST=13 AND V<23 THEN 410
204 IF ST=11 AND H>0 THEN 420
206 IF ST=7 AND H<19 THEN 430
210 LOCATE H,V+1,Z:IF Z=32 THEN GOSUB 440
220 IF STRIG(0)=0 THEN GOSUB 470
230 N=N+1:IF N>2 THEN N=1
231 GOSUB 600
298 LOCATE H,V,Z:IF Z=32 THEN COLOR 249:PLO
T H,V
299 GOTO 200
300 LOCATE H,V+1,Z:COLOR 32:PLOT H,V:IF Z11
90RZ=118 THEN 302
301 V=V+1:COLOR 249:PLOT H,V:GOTO 204
400 LOCATE H,V-1,Z:IF Z=222 OR (Z=32 AND C=22
2) THEN COLOR C:PLOT H,V:V=V-1:COLOR 249:PLOT
 H,V:C=Z
402 LOCATE H,V-1,Z:IF Z=222 OR (Z=32 AND C=22
2) THEN COLOR C:PLOT H,V:V=V-1:COLOR 249:PLOT
 H,V:C=Z
404 LOCATE H,V-1,Z:IF Z=222 OR (Z=32 AND C=22
2) THEN COLOR C:PLOT H,V:V=V-1:COLOR 249:PLOT
 H,V:C=Z
408 IF Z=118 OR Z=119 THEN 450
409 GOTO 210
410 LOCATE H,V+1,Z:IF Z=222 THEN COLOR C:PLOT
 H,V:V=V+1:COLOR 249:PLOT H,V:C=Z
412 LOCATE H,V+1,Z:IF Z=222 THEN COLOR C:PLOT
 H,V:V=V+1:COLOR 249:PLOT H,V:C=Z
414 LOCATE H,V+1,Z:IF Z=222 THEN COLOR C:PLOT
 H,V:V=V+1:COLOR 249:PLOT H,V:C=Z
418 IF Z=118 OR Z=119 THEN 450
419 GOTO 210
420 LOCATE H-1,V,Z:IF Z=32 OR Z=222 THEN COLO
R C:PLOT H,V:H=H-1:COLOR 248:PLOT H,V:C=Z
428 IF Z=118 OR Z=119 THEN 450
429 GOTO 210
430 LOCATE H+1,V,Z:IF Z=32 OR Z=222 THEN COLO
R C:PLOT H,V:H=H+1:COLOR 250:PLOT H,V:C=Z
438 IF Z=118 OR Z=119 THEN 450
439 GOTO 210
440 COLOR C:PLOT H,V:LOCATE H,V+3,Z:IF Z<>32
THEN 450
442 V=V+3:COLOR 249:PLOT H,V:C=32:RETURN
450 M=M+1:POKE 712,14:FOR W=100 TO 0 STEP -5:
SOUND 0,W,8,10:NEXT W:POKE 712,0
451 FOR W=0 TO 100 STEP 5:SOUND 0,W,8,10:NEXT
 W:SOUND 0,0,0,0
454 IF M>4 THEN 460
455 COLOR 32:PLOT M+15,0:COLOR C:PLOT H,V:C=3
2:H=9:V=22:COLOR 250:PLOT H,V
459 GOTO 200
460 POSITION 5,23:? #6;"tHe eNd":POKE 53279,0
:SOUND 1,0,0,0:GOSUB 2010:REM e of tHe and d
of eNd in inverse
468 IF PEEK(53279)<>6 THEN 468
469 POKE 77,0:POSITION 0,0:? #6;")":GOTO 190
470 IF H<1 OR H>18 OR V>19 THEN RETURN
471 LOCATE H,V,Z:IF Z=249 THEN RETURN
475 FOR W=0 TO 149 STEP 20:SOUND 0,14,8,INT(W
/10):NEXT W:SOUND 0,0,0,0
478 IF Z=250 THEN 490
479 IF Z=248 THEN 480
480 LOCATE H-1,V+2,Y:LOCATE H-1,V+1,Z:IF Z=32
 THEN COLOR 85:PLOT H-1,V+1:RETURN
481 IF Z=85 THEN COLOR 32:PLOT H-1,V+1:RETURN
482 IF (Z=118 OR Z=119) AND Y=32 THEN COLOR 8
5:PLOT H-1,V+1:GOTO 500
483 RETURN
490 LOCATE H+1,V+2,Y:LOCATE H+1,V+1,Z:IF Z=32
 THEN COLOR 85:PLOT H+1,V+1:RETURN
491 IF Z=85 THEN COLOR 32:PLOT H+1,V+1:RETURN
492 IF (Z=118 OR Z=119) AND Y=32 THEN COLOR 8
5:PLOT H+1,V+1:GOTO 500
493 RETURN
500 FOR W=1 TO 2:LOCATE H(W),V(W),Z:IF Z<>85
THEN NEXT W
502 FOR WW=255 TO 100 STEP -10:SOUND 0,WW,4,1
4:NEXT WW:KD=KD+1
503 POSITION 14,0:? #6;KD;
504 N=W:GOSUB 920
506 SOUND 0,0,0,0:B(W)=0:IF V=1 THEN SC=SC+20
507 IF V=4 THEN SC=SC+15
508 IF V=7 THEN SC=SC+10
509 IF V=10 THEN SC=SC+5
510 IF V=13 THEN SC=SC+1
517 POSITION 5,0:? #6;"  ";:POKE 77,0
518 POSITION 5,0:? #6;SC;"  ";:IF SC<0 THEN PO
SITION 5,0:? #6;"_";
519 RETURN
600 LOCATE H(N),V(N)+1,Z:IF Z=32 OR Z=220 THE
N 610
601 IF (Z=118 OR Z=119) AND ((V(N)-1)/3<>INT(
(V(N)-1)/3)) THEN RETURN
602 LOCATE H(N)+D(N),V(N),Z:COLOR C(N):PLOT H
(N),V(N):C(N)=Z:H(N)=H(N)+D(N)
603 IF (Z=118 OR Z=119) AND N=1 THEN C(1)=C(2
)
604 IF (Z=118 OR Z=119) AND N=2 THEN C(2)=C(1
)
605 IF D(N)=-1 THEN COLOR 118:IF H(N)<1 THEN
D(N)=1
606 IF D(N)=1 THEN COLOR 119:IF H(N)>18 THEN
D(N)=-1
607 PLOT H(N),V(N):IF V(N)=22 AND (H(N)=0 OR
H(N)=19) THEN 640
608 IF Z>230 THEN C(N)=C:GOTO 450
609 RETURN
610 IF Z=32 THEN 620
612 COLOR C(N):PLOT H(N),V(N):V(N)=V(N)+1:C(N
)=Z:COLOR 118:PLOT H(N),V(N)
618 IF Z>230 THEN C(N)=C:GOTO 450
619 RETURN
620 B(N)=B(N)+1:SOUND 0,14,8,B(N):IF B(N)>1 T
HEN 625
622 COLOR C(N):PLOT H(N),V(N):V(N)=V(N)+1:IF
D(N)=1 THEN COLOR 119:GOTO 624
623 COLOR 118
624 PLOT H(N),V(N):RETURN
625 IF (B(N)<14 AND KD<11) OR (B(N)<8 AND KD>
10) THEN RETURN
626 COLOR 85:PLOT H(N),V(N):V(N)=V(N)-1:IF D(
N)=1 THEN COLOR 119:GOTO 628
627 COLOR 118
628 PLOT H(N),V(N):B(N)=0:SC=SC-5:POSITION 5,
0:? #6;SC;"  ";:IF SC<0 THEN POSITION 5,0:? #6
;"_";
639 SOUND 0,0,0,0:RETURN
640 COLOR 32:PLOT H(N),V(N):FR=FR+1:FOR W=1 T
O 15:SOUND 0,INT(RND(0)*100),10,10:NEXT W:SOU
ND 0,0,0,0:GOSUB 920
645 POSITION 18,23:? #6;FR;:IF FR>9 THEN 460
649 RETURN
900 FOR W=2 TO 20 STEP 3:POSITION 0,W:? #6;"U
UUUUUUUUUUUUUUUU":NEXT W
901 POSITION 0,23:? #6;"JJJJJJJJJJJJJJfreeOJ"
;
909 RETURN :REM following "*" in lines 910-91
2 all in inverse
910 FOR W=2 TO 20 STEP 3:X=INT(RND(0)*8)+1:PO
SITION X,W:? #6;"*":POSITION X,W+1:? #6;"*":P
OSITION X,W+2:? #6;"*"
```

230
199

or 94 or 85

Stan Ockers: TIGER   listing

```
1 REM ******************
2 REM * ACE NEWSLETTER*
3 REM *3662 VINE MAPLE*
4 REM * EUGENE, OR    *
5 REM *    $10 YR     *
6 REM * BULLETIN BOARD*
7 REM * (503)343-4352 *
8 REM * OCT 82 ISSUE  *
9 REM ******************
10 REM *****************
20 REM ** TIGER ** 
30 REM **STAN OCKERS**
35 REM **   9/82    **
40 REM *****************
50 REM
90 GOSUB 1000:RESTORE 110
99 REM ** CURSOR MOVEMENT ROUTINE **
100 DIM SK$(51):FOR I=1 TO 51:READ A:SK$(I,I)
=CHR$(A):NEXT I:SK=ADR(SK$)
110 DATA 104,173,120,2,133,207,165,208,70,207
,176,6,201,0,240,2,198,208,70,207,176,6,201,1
9,176,2
120 DATA 230,208,165,209,70,207,176,6,201,0,2
40,2,198,209,70,207,176,6,201,19,176,2,230,20
9,96
129 REM ** X AND Y COORDINATES FOR 22 'ROOMS'
**
130 DIM RC(21,1):FOR I=0 TO 21:READ A,B:RC(I,
0)=A:RC(I,1)=B:NEXT I
140 DATA 17,12,11,15,13,13,14,17,17,15,15,12,
15,9,17,7,14,2,12,5,12,9,9,9,8,15,2,11,5,12
150 DATA 6,9,9,5,6,2,5,4,3,2,2,5,2,8
159 REM ** AVAILABLE 'NEXT ROOMS' **
160 DIM NR(21,2):FOR I=0 TO 21:READ A,B,C:NR(
I,0)=A:NR(I,1)=B:NR(I,2)=C:NEXT I
170 DATA 4,7,0,2,3,12,1,5,2,1,4,3,0,3,5,2,4,6
,5,7,10,0,6,8,7,9,8,8,10,16,6,9,10,12,15,11,1
,11,12
180 DATA 14,21,13,13,15,14,11,14,16,9,15,17,1
6,18,17,17,19,18,18,20,19,19,21,20,13,20,21
181 REM ** STRINGS FOR PITCH AND LOUDNESS OF
ROAR **
182 DIM P$(20),L$(20):RESTORE 185:FOR I=1 TO
20:READ A:P$(I,I)=CHR$(A):NEXT I
184 RESTORE 186:FOR I=1 TO 20:READ A:L$(I,I)=
CHR$(A):NEXT I
185 DATA 250,243,234,225,225,215,214,210,205,
210,214,215,225,228,234,237,243,246,247,250
186 DATA 5,6,8,10,12,15,15,15,15,14,13,12,11,
10,9,8,7,6,5,4
192 REM ** C$ HOLDS THE CHARACTERS PRINTED OV
ER BY 'ROAR' **
194 REM ** X AND Y ARRAYS HOLD COORD. OF AVAI
LABLE NEXT 'ROOMS' **
196 DIM C$(4),R$(4),X(2),Y(2):R$="roar":OPEN
#1,4,0,"K:"
197 REM ** SET 'ROOM' TO ZERO , ZRM IS PRESEN
T ROOM CHAR. (DIFFERENT COLORS) **
198 RM=0:POKE 208,12:POKE 209,17:DOCFLG=0:ZRM
=61
200 GRAPHICS 17:POKE 752,1:POKE 756,START/256
:POKE 708,37:POKE 709,152:POKE 710,244:POKE 7
12,42
210 GOSUB 2010:POSITION 3,21:? #6;"INSTRUCTIO
NS?":GET #1,K:IF K<>89 THEN 275
220 POSITION 3,20:? #6;"YOU ARE GOING    DOWN
THE CONGO RIVERWHEN A CREWMATE GETS VERY ILL
   press key":GOSUB 1220
224 GOSUB 1200:POSITION 2,20:? #6;"THERE IS A
 DOCTOR IN A VILLAGE [left]  QUITE FAR FROM T
HE    DOCK [right]"
226 GOSUB 1220:GOSUB 1200:POSITION 3,20:? #6;
"YOU MUST GET THE DOCTOR AND BRING HIM BACK T
O THE BOAT":GOSUB 1220
228 GOSUB 1200:POSITION 3,20:? #6;"THE PROBLE
M IS A MAN EATING TIGER":GOSUB 1220
230 GOSUB 1200:POSITION 2,20:? #6;"YOU ONLY K
NOW HIS  GENERAL LOCATION   FROM HIS ROAR":
GOSUB 1220
```

```
232 GOSUB 1200:POSITION 2,20:? #6;"HE WILL ON
LY CROSSTHE STREAM USING THE LOG IN THE CENTE
R   OF THE SCREEN"
234 GOSUB 1220:GOSUB 1200:POSITION 1,21:? #6;
"YOU MAY USE EITHER   OF THE BRIDGES":GOSUB 1
220
236 GOSUB 1200:POSITION 3,20:? #6;"TRY TO AVO
ID THE TIGER press any key when ready":GOSUB
1220
275 GOSUB 1200:POSITION 17,12:? #6;"!":REM FI
RST POSITION IS THE DOCK
280 TP=INT(RND(0)*21):GOSUB 900:REM INIT. TIG
ER POS. IS RANDOM
300 A=USR(SK):Y=PEEK(208):X=PEEK(209):LOCATE
X,Y,Z:POSITION X,Y:? #6;"x":FOR I=1 TO 10:NEX
T I:REM CURSOR ON
310 POSITION X,Y:? #6;CHR$(Z):FOR I=1 TO 10:I
F STRIG(0)=0 THEN 330:REM CURSOR OFF, CHECK F
OR TRIGGER
320 NEXT I:GOTO 300:REM LOOP BACK
329 REM ** FILL NEXT ROOM COORDS.**
330 FOR I=0 TO 2:X(I)=RC(NR(RM,I),0):Y(I)=RC(
NR(RM,I),1):NEXT I
339 REM ** CK IF PRESENT POS. IS A PERMITTED
MOVE **
340 I=0
342 IF X(I)=X AND Y(I)=Y THEN 350
344 I=I+1:IF I=3 THEN 300
346 GOTO 342
349 REM ** PUT OLD ROOM BACK, UPDATE ROOM **
350 POSITION RC(RM,0),RC(RM,1):? #6;CHR$(ZRM)
:POKE 208,Y(I):POKE 209,X(I):RM=NR(RM,I)
360 LOCATE X(I),Y(I),ZRM:POSITION X(I),Y(I):?
 #6;"!"
369 REM ** CK FOR REACHING DOCTOR **
370 IF RM=21 AND DOCFLG=0 THEN DOCFLG=1:GOSUB
 500
379 REM ** CK FOR BRINGING DOCTOR BACK **
380 IF RM=0 AND DOCFLG=1 THEN GOTO 700
399 REM ** DETERMINE TIGER'S MOVE **
400 R=INT(RND(0)*4):IF TP>RM THEN TP=TP-R
410 IF TP<RM THEN TP=TP+R
420 IF TP=RM THEN 800
430 IF TP<0 THEN R=INT(RND(0)*4):TP=TP+R:GOTO
 420
440 GOSUB 900
450 GOTO 300
499 REM ** REACHED THE DOCTOR **
500 GOSUB 1200:POSITION 7,21:? #6;"you got":P
OSITION 5,22:? #6;"the doctor":FOR K=100 TO 5
0 STEP -2
510 SOUND 0,K,10,10:FOR L=1 TO 10:NEXT L:NEXT
 K:SOUND 0,0,0,0:RETURN
599 REM ** TIGER'S ROAR **
600 FOR I=1 TO 4:LOCATE V,W,ZSV:C$(I,I)=CHR$(
ZSV):POSITION V,W:? #6;R$(I,I):V=V+1:NEXT I
620 GOSUB 650:V=V-4:POSITION V,W:? #6;C$:RETU
RN
650 FOR K=1 TO 20:SOUND 0,ASC(P$(K)),2,ASC(L$
(K)):SOUND 1,ASC(P$(K))-75,12,ASC(L$(K)):FOR
J=1 TO 10:NEXT J:NEXT K
660 SOUND 0,0,0,0:SOUND 1,0,0,0:RETURN
699 REM ** SAVED CREWMAN **
700 GRAPHICS 18:POSITION 3,3:? #6;"THE DOCTOR
 WAS     ABLE TO SAVE THE       CREWMAN!"
705 POSITION 2,7:? #6;"congratulations!"
710 POSITION 5,9:? #6;"TRY AGAIN?":POSITION 5
,10:? #6;"press start":GOTO 830
799 REM ** TIGER GOT YOU **
800 GOSUB 1200:FOR L=1 TO 3:POSITION X(I),Y(I
):? #6;"t":GOSUB 650:POSITION X(I),Y(I):? #6;
CHR$(ZRM):NEXT L
810 POSITION 3,20:? #6;"TIGER GOT YOU":POSITI
ON 7,22:? #6;"again?":POSITION 4,23:? #6;"PRE
SS START"
830 IF PEEK(53279)<>6 THEN 830
840 GOTO 198
899 REM ** TIGER LOCATION **
```

```
900 TS=INT(TP/5+0.9):GOSUB 1200:POSITION 5,21
:? #6;"TIGER IS":POSITION 3,23
910 IF TS=1 THEN ? #6;"IN THE SWAMP":V=13:W=1
5
920 IF TS=2 THEN ? #6;"IN THE FOREST":V=13:W=
6
930 IF TS=3 THEN ? #6;"ON THE PLAIN":V=4:W=13
940 IF TS=4 THEN ? #6;"IN THE HILLS":V=4:W=5
950 IF TS=5 THEN ? #6;"IN THE VILLAGE":V=0:W=
9
960 IF TS=0 THEN ? #6;"ON THE DOCK":V=16:W=11
990 GOSUB 600:RETURN
999 REM ** CHANGE CHARACTER SET **
1000 DIM ZZ$(32):RESTORE 1010:FOR I=1 TO 32:R
EAD A:ZZ$(I)=CHR$(A):NEXT I
1010 DATA 104,104,133,204,104,133,203,104,133
,206,104,133,205,162,4,160,0
1012 DATA 177,203,145,205,136,208,249,230,204
,230,206,202,208,240,96
1014 POKE 106,PEEK(106)-5:GRAPHICS 0:START=(P
EEK(106)+1)*256:POKE 756,START/256:POKE 752,1
:? "INITIALIZING ..."
1016 A=USR(ADR(ZZ$),57344,START):RESTORE 1020
:FOR I=START+24 TO START+247:READ A:POKE I,A:
NEXT I
1018 RESTORE 1120:FOR I=START+8 TO START+15:R
EAD A:POKE I,A:NEXT I:RETURN
1020 DATA 3,7,14,28,24,24,24,24,24,0,0,0,248,252
,14,7,3,192,224,112,56,24,24,24,24
1030 DATA 24,24,24,24,24,28,14,7,3,3,7,14,252,24
8,0,0,0,192,224,112,63,31,0,0,0
1040 DATA 24,24,24,24,24,24,24,24,0,0,0,255,2
55,0,0,0,192,127,63,0,0,63,127,192
1050 DATA 3,254,252,0,0,252,254,3,0,123,0,221
,0,123,0,246,0,0,0,0,0,0,24,24,0
1060 DATA 16,56,84,56,84,186,16,16,0,32,112,1
70,119,170,39,34,0,0,0,0,0,168,117,34
1070 DATA 0,0,0,24,60,126,231,195,3,7,14,28,2
4,0,0,0,3,7,14,28,56,112,224,192
1080 DATA 192,224,112,56,28,14,7,3,192,224,11
2,56,24,0,0,0,102,153,0,0,102,153,0
1090 DATA 1,3,7,15,31,63,127,255,128,192,224,
240,248,252,254,255,15,15,15,15,15,15,15,15
1100 DATA 240,240,240,240,240,240,240,240,0,0
,20,8,88,45,170,170,255,255,195,195,195,195,2
55,255
1110 DATA 255,255,255,255,255,255,255,255
1120 DATA 0,24,60,60,60,255,255,0
1199 REM ** CLEAR TEXT AREA **
1200 POSITION 0,20:? #6;"

                      ":RETURN
1219 REM ** WAIT FOR KEY PRESS **
1220 FOR I=1 TO 100:NEXT I:IF PEEK(764)=255 T
HEN 1220
1222 POKE 764,255:RETURN
2008 REM ** PRINT SCREEN **
2009 REM ** IN LINES 2010-2029 ALL Q'S ARE RE
ALLY (CTRL W)'S **
2010 ? #6;"    2200       Q";
2011 ? #6;"   43 QQ       Q";
2012 ? #6;"  A  A$ QQ   =$ / Q";:REM A IS (E
SC CTRL =), = AND / ARE INVERSE
2013 ? #6;"36# 5#  5 QQ 4  5  Q";
2014 ? #6;"36)  A 2 %QQ# /0 % Q";:REM A IS (E
SC CTRL =), / AND O ARE INVERSE
2015 ? #6;" A  4 ABC=  0) Q";:REM A'S ARE
 (ESC CTRL =),B IS (INV CTRL K),C IS (INV CTR
L L), = AND O IS INV
2016 ? #6;"  )454  4 QQ) /  ) Q";:REM / IS IN
VERSE
2017 ? #6;"AB) 4  4  QQ) 0/ = Q";:REM A IS (I
NV CTRL X),B IS (INV CTRL Y),O / AND = ARE IN
VERSE
2018 ? #6;"AB=   # 1 QQ)0  4) Q";:REM A IS (I
NV CTRL Z), B IS (ESC ESC) 0 IS INV
2019 ? #6;"  )1  A##A--=## ) Q";:REM A'S ARE
(INV ESC CTRL =), ='S ARE INVERSE
```

TIGER

"Tiger" is a simulation which requires little more than luck to win (a small amount of thinking helps). It does however offer some useful programming items.

A machine language routine in SK$ (lines 100-120) replaces quite a few lines of Basic code and should prove of value anytime you need a cursor to run over a character mode screen."Listing 2" gives the code which updates two zero page locations (208 & 209) according to the position of joystick (0). The advantage mainly in smoothness and speed over the equivalent Basic code. Calling is by: A = USR(ADR(SK$)) as shown in lines 300-320. Limits of X and Y movement are built in (VHILIM, VLOLIM, HHILIM& HLOLIM).

Certain screen locations are allowable next "rooms" in the parlance of adventure programs. I use strings to hold coordinates of these rooms rather than arrays because the strings use a lot less memory! If the program didn't have to be printed, a lot more room could have been saved by initializing the strings by defining them (A$ = STRING). Control andgraphic characters cause most printers fits, however, so I've initialized the strings from data statements (also slow!).

Graphics 1 is used, (GR. 17 actually for full screen), again for memory conservation. If you have images which are repeated a lot you can cover a lot of screen using little memory by redefining the character set. This is done in lines 1000-1120. Again, if the program were not for publication, I could have put the new data in a string and mapped it into the new character set area.

There are 5 colors available in GR. 1; for example a lower case character will be printed the same as the upper case one but in a different color. There are 64 characters available, the first 64 in the character set in our case. Table 9.6 (page 55) in the Basic Reference Manual gives the characters in their character set order. Columns 1 and 2 give our basic set, some have been changed of course. Columns 3 and 4 give the corresponding characters in another color. Imagine another table using the inverse characters of those in table 9.6. This provides two more colors of the four color character set. Background provides a fifth color.
The associated color registers are:
COLOR POKE TABLE
0 708 Columns 1 & 2
1 709 Columns 3 & 4
2 710 Inv. of col. 1 & 2
3 711 Inv. of col. 3 & 4
4 712 Background
I find the character set modes very useful for making large drawings fast. One annoyance is not being able to have many colors in one character. Atari has provided a way around this in mode 4 (not available from Basic). In mode 4 you can have three different colors and background in your characters at once. The characters are the size of GR. 0 characters and the pixels are the height of GR. 8 pixels and the width of GR. 7 pixels. That's quite a bit of resolution with relatively small memory requirements. It will have to wait for another time though.

GOBBLER UPGRADE

by Dale Lutz

While the game GOBBLER is an excellent bit of programming, a few areas need some polishing. When I first played the game, I saw parts of the maze disappear. This resulted from the use of LOCATE in the routine to put a gold bag on the screen. To overcome the problem, I did the following:

LINE 220: (Change the expression to calcualte V to) V=INT (RND
(0)*8)+2... (rest the same)
LINE 221: (add this line) IF EX=0 THEN IF Z<>32 THEN COLO
R Z: PLOT H,V
Since I like high impressive scores, I changed the following parts of the following Lines:

LINE 610: (change the expression to calculate S to) S=S+INT (L/2
+0.5)
LINE 620: (change the same S expression to) S=S+20*INT(L/2
+0.5)
LINE 664: (change the same expression to) S=S+100 *(L/2+0.5)

The rest of these Lines remain the same.
Just because I worried about LOCATE modifying the program (I'm told it can and does), I put a D$ = STR$(0) after each LOCATE (I'm told this is the fix). Of course, D$ must be previously DIMmed.
Another improvement which might be made is to make a second maze for even Level numbers. The routine would begin at Line 920. I leave it to other, more creative members to design a maze and add it.

GRUBS

by Sydney Brown, Australia

LINE 1: Dimensions all the strings and sets the colors for the instructions. The instructions and Score Table follow. Instead of waiting for the character redefinition program to complete its job, I have placed the Score Table on the screen at this point to fill the gap.
LINES 19-106: Are used to redefine the character set using the same method as Gobbler.
LINES 190-199: Initialize the image on the screen and set all variables to their starting values.
LINES 200-299: Contain the main body of the program. These lines are used to sense a joystick movement (200, 206), move the man vertically, and select which grub is to move during the present cycle.
LINES 400-442: Contain all the logic for moving the man and sensing when he must go up or down a ladder or whether he has been gobbled by a grub.
LINES 450-459: This subroutine is where the program goes when you lose a man; it also removes one of the men from the top of the screen and produces the required sounds.
LINES 460-469: Contain the game over sequence and on pressing START sends you back to Line 190 to initialize and begin again.
LINES 470-493: On pressing the dig/bury button, the program jumps up here to work out whether to dig a hole, fill in an empty hole, or bury a grub.
LINES 500-519: Work out which grub is buried and what score it is worth, and generate a new grub towards the top of the screen.
LINES 600-649: Contain the subroutine to move the grubs and sense when one escapes.
LINES 900-909: Are used to randomly place the ladders so they will be different every game.
LINES 920-929: Are used to randomly select the level upon which the new grubs will enter the screen.
LINES 1000, 1050: Contain the data for the redefined character set.
LINES 2000-2019: Contain the subroutine for the start and game over tunes for which the data is held in Lines 1100 and 1200.
I hope you have more fun playing the game than I had programming it. The debugging process was extremely frustrating and time consuming. To be honest, I feel the quality and speed of this game surpasses many of the programs commercially available.

MARATHON

Educational Software, Inc.
A Review by Alice Miles Erickson
Written by Geoff Brown

MARATHON is an educational game imported from England. Described as a game for the whole family, its content options include Addition Facts, Subtraction Facts, Multiplication Facts, and Division Facts. Every fifth problem requires identification of a multiple of a single number. The difficulty levels are described as *Walker, Jogger, Sprinter, or Olympian*. These levels determine the speed of the required response. Runners are displayed at the top of the screen providing a graphic representation of the progress of the race.

Because it is a game requiring quick responses and competition with time or another player, MARATHON is probably best suited for use as a *speed builder* activity rather than for initial instruction of basic facts. Although the program does provide correct answers when an incorrect response is given, we find children who did not already know the facts become quickly frustrated and *didn't want to play*. Additionally, the response mode requires answers be located on a grid of several options with the use of a joystick and fire button. Children and adults not having experience with a joystick cannot readily locate the answers. This game appears to require a great deal of dexterity in the use of a joystick as well as knowledge of math facts.

CONCLUSIONS: Because it is a timed exercise which requires expertise in the use of the joystick, MARATHON can become an experience in frustration rather than application of math skills. Based on the responses of children and adults who reviewed this prgram, we can only give it a rating of *Fair*.

A new group without a name has formed to evaluate, design, and find out about software available for the purpose of education. Not just the education of the student, but of the parent, teacher, and every other person who wishes to learn.

This new group wishes to evaluate material which is available, catalog it, and eventually to write programs it feels are missing, or for which some need has been shown for its creation.

Once the software has been catalogued and evaluated, then the manufacturers of software will be contacted to apprise them of the gaps and what new software is needed with the hope they will fill the void.

While the tasks involved seem to be big ones, and a lot of good information will come out of the group's findings, there will be a lot of fun involved, too, as many of the programs will be games. We hope software firms will hear about what we are doing and send us their software for evaluation.

This new group, while it learns what the computer and its programs can do for education, will in turn be educated. Isn't this what this is all about?

Meetings will be held the first Tuesday of each month. The next meeting is November 2, 1982. For further information contact Larry Gold at 503-686-1490.

PAINT

Reston, VA $40)

At the San Francisco Computer Faire last Spring, the two most impressive programs demonstrated were **MicroPainter** by DataSoft, and **Paint**. MicroPainter has been out for some time, and now Paint has been released. Befitting a company which is primarily a book publishing company, including such outstanding books as **The Atari Assembler** and the fantastic **Atari Games and Recreations**, Paint comes with an outstanding book of 147 pages. This book has 44 pages of directions on using the program with the rest devoted to computers, art, computer art, etc. There are many full color pictures, and even a section on ideas to use for Paint. The program consists of two different painting programs—one for children and one for adults—and an Artshow to show your work. It includes a number of paintings as demonstrations.

With the advanced program, there are 81 size and type of brushes available, many colors, many textures, and the ability to change them. There are 24 painting commands, including automatic circle and rectangle generating, various fill comands, 2 levels of "Zoom" for magnification, a number of paint pots to use, all of which can be changed to your needs, the ability to mix colors and textures, and many other features. You can save your masterpieces to disk, but alas, I could not use them with other programs since a non-standard DOS is used. I was unable to find a way to access the file with the picture on it in order to dump to a printer, etc.

I enjoyed this program a great deal and could recommend it to anyone, espcially for a christmas present to a young one of any age who likes to draw. With the Simple program, a small child should have no problems with it. If it only had standard files or a way to use the pictures in your own program, it would blow all the other similiar graphic programs away!!

—M. Dunn

Atari Sound and Graphics

(Moore et al, J. Wiley, 1 Wiley Dr., Somerset, N.J. 08873, $10)

This is a new self-teaching guide by the authors who brought you the book, **Atari BASIC**, which came with your 800. It is well done, and a natural extension of your first book to get you on your way on learning the basics of sound and graphic programming. Recommended to beginners who want to learn the easy way.

—M. Dunn

Compute!'s 2nd Book of Atari

(Compute!POB 5406, Greensboro, NC 27403, $13)

For those of you who were disapointed with Compute!'s first book of Atari, **run** to your nearest book store and buy this one! They have more than made up for that rehash with this new book. Everything in it is new, well done, and useful. There are several programs, including assembly source codes, which are worth much more than the cost of the book. Utilities such as a 49 second graphics 8 to Epson 80 screen dump, painting and texturing routines, banner generator, music from your keyboard speaker; 249 pages of great stuff, much of it unique.

Of even greater interest is many of the authors are ACE members, some who have even shared their knowledge in these page in the past —**please keep doing so!!**

—M. Dunn

SHATTERED ALLIANCE

Strategic Simulations
48k disc about $35
Warranty: 30 days then $10
(review by Steve Berg, Phillipine Islands)

There are seven scenarios in this tactical war game. Three scenarios are from the short story included with the game. The other four are replays of ancient battles (like Romans vs Vikings). There are two basic types of units in this pre-gunpowder war game: infantry and calvary. Each of these groups have a number of subgroups depending on their armor (light to extra heavy). The lighter the unit, the more often it can move, but the less it can withstand combat. The units have a variety of weapons from bows and rocks to pikes and hand weapons.

Units are moved in time increments, the lighter the unit, the more often it can move one space. Calvary units may move more often than infantry. During a unit's movement phase, it may fire arrows (lances or rocks) if so equipped. It may attack adjacent enemy units or move one hex. Magic is available in some of the scenarios.

The graphics used for terrain and unit types are fair to good. There is no sound. It takes about 10 minutes to load the game (Really!). At the end of a predetermined number of moves, the game ends and the computer determines the winner. There is no easy way to continue the game. You must save the game (at or before the end) and then take another 10 minutes to reload it.

The game lasts from 30 to 120 minutes depending upon your speed and the scenario you choose. You may select a two player game or you may play against the computer. The graphics and the Atari sound generators utilized to add sophistication to the game could be enhanced. I recommend this game for those who enjoy playing war games.

MEGALEGS

Megasoft
16K disk or tape
NO WARRANTY!!

Megalegs, as Marc said, is a centipedes look alike except it looks better and sounds better than the original. Sometimes I have difficulty loading the game and the warranty (what warranty?) doesn't give me any confidence.

The game is excellent, the warranty isn't so caveat emptor!!

APPLE PANIC

Broderbund Software
48K disc about $30
FULL WARRANTY

Apple Panic is an outstanding one player arcade game. It looks identical to the original Apple version. In the game you control the little man being chased by apples. The man digs holes for the apples to fall into and before they climb out he bops them on the head five times with his shovel. In advanced levels other beasties must fall through two or three levels.

The game has great graphics and sound. I highly recommend it.

Please note: I have included warranty information in my review. I believe we can't be informed consumers without it. So, if you write a review, please include it. Full warranty means if the disc ever fails then return it for a new one.

Percom Disk Drives

(Percom Data, 11220 Pagemill Road, Dallas, TX 75243)

We have had a dual 40 track double density Percom drive up on the bulletin board for about 2 months now, on 24 hours a day. The drive is well made, heavy, and seems to work fine. The DOS for double density is not compatable with all software, and, of course cannot be used for self-booting disks such as Filemanager 800 in the double-density mode. There is a switch on the back for single/double density, and a modified DOS. There will be released soon a special DOS by Bill Wilkinson of O.S.S. which is "Unix-like" and should solve some of the problems of the present Percom DOS. When the drive first arrived, it did not work, but I found, by turning the switch on and off, or by pressing the little reset button on the front, it went on fine. Since the Bulletin Board is on 24 hours a day, the on/off switch is not used much, so I didn't send it back. For some reason, the ARMUDIC Bulletin Board program will not work in double density but the download programs will, so I have one disk on single and one on double at the present time. A new version of ARMUDIC is coming out which will work with it- I wonder if this is the same problem which caused us so much trouble with the Axlon RamDisk!

It uses Tandom drives, so the index hole is used- this means you cannot write on the back side of a disk without punching out the index hole too. It runs at 300 RPM, instead of 289-291 of the Atari drive. There is a "standard" disk drive plug in the back which can be used to plug in any 5 1/2 drive or 8" drive, but there is no software yet for the 8"drive. I like the drive and recommend it to anyone who needs the extra disk space and has programs which can use it.

—M. Dunn

Advanced Music System

by Lee Actor
APX-20100 $29.95
A review by Ron Ness

Are you unhappy with your Music Composer cartridge? Do you feel your music would sound better if you could have more bass notes? Do you want to be able to put more feeling in your works by emphasising some notes or being able to use a crescendo or decrescendo? Do you want to have octaves instead of just a ... Well, as the old saying goes, "Build a better mousetrap and the world will beat a path to your door" and this is the better mousetrap!!!

Available are 4 voices, 5½ octaves(from 3 below middle C to 2½ above) and 15 possible volumes for each note. The format for entering the notes is similar to that for the Composer cartridge, note, octave, duration, but here the similarity ends. You can control the volume for each individual note. Also possible with the Advanced Musicsystem is the use of triplets, septuplets, etc. There is no easy way to do this with the Composer cartridge. Need to repeat a note or measure? Just type in REP and the note number or measure number(s). Also on the disk are several demo pieces including "Flight of the Bumblebee","Fantasy-Impromptu"and "The Well-Tempered Clavier". These pieces show what you can do and do very well, I might add. There are many, many other features such as recording to your stereo and then playing back in time with the computer giving you 8 or even more voices; chaining, and what to do if you have an exceptionally long piece of music and run out of memory. The documentation by the author is excellent. I could rave on for several pages about what a great program this is, but space will not allow. I guess you will just have to trust me ... for better music on your Atari, this is it! And the best part is the price. Just half the price of the Music Composer. Oh, what's on the screen? A piano keyboard complete with black and white keys which turn red, green, blue, or pink as each voice is played.

Tricky Tutorials No. 7

DISK UTILITIES by Jerry White
A review by Aaron Ness

This booklet and disk are full of good programs to help you understand more about your Atari disk drive. This program is just one in a series by Jerry White. I just had a spare moment from school work to look at this disk. This disk lets you inspect your disk, check the speed of your drive, explains what a disk file is, and much more.

The RPMTEST program is very similar to the public domain RPM program, but runs smoother and has some finer touches. The INSPECT program allows you to check the disk by program, by sector, or by file. This is a very good way to find errors in a program. The DISKLIST program allows a user to make their own label(s) for a diskette using a printer. The FILES program gives a person 4 choices: (1). Create a disk file. (2). Read a disk file. (3). Add to a disk file. (4). Update a disk file. The book also has some excellent documentation explaining what a disk file is and how it works. I was unable to run the TEST1 program, but the FORMAT1 program worked fine. With it, a user can format disks without going to the DOS system and with a lot less key punching. The AUTORUN program lets a user make their own AUTORUN.SYS for their own programs.

I hear Mom calling and have to go, but the last thing I want to say is Tricky Tutorials No. 7 is a good investment for the intermediate to advanced programer.

THIRD WORLD ATARI

After a 3 month visit to the U.S. I'm finally back to the sunny West Indies. Things have definitely changed in the quality and quantity of software that is being produced for the Atari in the U.S. I want to thank Michael Dunn of ACE, Tom Mannos from the Atari Computer Association of Orange County, Gary Furr from Atari and James Cappareli from Antic for responding to my call for some foreign aid greatly needed.

Just a side note, down here in most of the islands there are NO video parlors, but plenty of quarters for those interested in helping with Carribean investments!!!!

On returning I found the computer still operated after the contacts had been cleaned and a few prayers had been said. The problem I've run into is the discs. Since I left them stored in a dark, humid environment, some of them have taken to growing some sort of nasty looking slime. The discs which didn't take up this activity smell like an old sweat shirt which has been stored in an attic for the last 6 months.

Definitely, if you store discs take more care and more precautions than I did. The bacterial film on all my discs does not seem to effect their operation (yet). I haven't touched the Slime Discs and will appreciate any suggestions or ideas about how to clean them for use.

We brought down a printer and got it through customs without any problems. It became a "Library Card Duplicator" rather than a "Computer Printer" and sailed through with flying colors. Make SURE you have all receipts and documentation for items you are bringing into another country. Many places you will have to pay 50% of the total price (including tax) as duty. Yes, that's five zero percent. So, if your receipt says $1,000 then you pay $500. If some how a few zeros are missing from your receipt and it says $100 then you pay $50. I hope you can see how it works and can plan accordingly.

One thing the British left the islands (but not much more) is their wonderful bureaucratic system. You think the US is bad??? These people have perfected this technique to a science. The system gets a bit altered depending on the local customs of the land, but the basic premise is the same:

IF ITS NOT ON PAPER, IT DOSEN'T EXIST

So, whatever they see in print, be it $10 or $100 or $1000 regardless of the physical facts before them, usually stands.

If anyone wants to write and be invited down to the sunny, hot, West Indies where the water is clear and the air is clean, here is my address:

LINT HUTCHINSON
Counseling Office
St. George's University,
School of Medicine
St. George, Grenada
WEST INDIES

New Products

Mosaic Electronics (POB 708, Oregon City, OR 97045) has announced a 64K bank select RAM board for the Atari 400 for $250. I will be getting a board soon and will review its unique features in the next issue, if it arrives in time. **ScreenSonics** 14416 S. Outer Road 40, Chesterfield, MO 63017 now has an add-on keyboard for the 400 for $250 installed or $170 for do-it-yourself or $70 for a conversion kit (I don't know what that means either).

While everyone in the world was at the US Festival, I went to the Cabrillio Music Festival in Santa Cruz, California to hear my favorite jazz pianist Keith Jarrett. I had to get back to work Labor Day weekend, so I could not hear my favorite group, Fleetwood Mac at the US, but Mr. Jarrett made up for it—my in-laws live nearby, and it was mostly to visit them. While there, I had a chance to visit Robin Sherer of Santa Cruz Educational Software (4565 Cherryvale, Soquel, CA 95073, and saw some of his new *Tricky Tutorials*. These programs are the best way to learn particular techniques. In **Compute!'s** Second Book of Atari, many of the articles give tribute to these tutorials for pointing out the way for the authors. The newest one, #7, *Disk Utilities* by the prolific Jerry White, ACE member, looks very good and is reviewed in this issue. *Marathon* is an excellent math quiz game which our educational S.I.G. is reviewing. The biggest bargin was *Space Games*, three very nice games in BASIC which can be listed to show programming techniques for only $25!! Soon to be released are tutorials on *PEEKS ¿ POKES*, other machine language things and other surprises. The indispensable *Master Memory Map* is now a book with cartoons, etc, still only $7. One of the biggest customers of the Tricky Tutorials is Atari—just to illustrate the quality of these teaching programs.

Robin has just received the *Leading Edge* parallel commercial disk drive. This one had 4 disk drives and will make 4 copies of a disk, verify the copy is correct, and spit them out in 30 seconds.

Atari Computer Enthusiasts

A.C.E. is an independent computer club and user's group with no connection to the Atari Company, a division of Warner Communication Company. We are a group interested in educating our members in the use of the Atari Computer and in giving the latest News, Reviews and Rumors.

All our articles, reviews and programs come from you, our members.

Our membership is world-wide in scope; membership fees include the A.C.E. Newsletter. Dues are $10 a year for U.S., and $20 a year Overseas Airmail and include about 10 issues a year of the ACE Newsletter.

President—Kirt Stockwell, 1810 Harris #139, Eugene, Or 97403 503-686-2470
Secretary—Charles Andrews, POB 1613, Eugene, Or 974401613 503-747-9892
Librarian—Chuck and Jody Ross, 2222 Ironwood, Eugene, OR 97401 503-343-5545
Editors—Mike Dunn, 3662 Vine Maple Dr., Eugene, Or 97405 503-344-6193
      Jim Bumpas, 4405 Dillard Rd., Eugene, Or 97405 503-484-9925

Send a business-size SASE to the Ross' for the new, updated ACE Library List!! Best of ACE-1981, still available, Disk or Tape, $8!
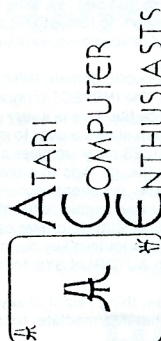
OCTOBER MEETING

Meetings are always on the 2nd Weds night at 7:30. The next meeting will be on Oct. 13, at the LCC SCIENCE 111 Building. Park at the East end of the South parking lot; walk North to the building.

Bulletin Board

(503) 343-4352

Now has a Tara 48k Atari 400, 2 double density Percom disk drives, Hayes SmartModem. SYSOPs are passed around: Chuck & Jody Ross, Kirt Stockwell, and Mike Dunn at various days. Running ARMUDIC now from Frank Hubband—many programs from ACE—room for you to add more, if you like. Download the latest ACE programs.

ATARI COMPUTER ENTHUSIASTS

FIRST CLASS MAIL